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10/512,409	07/01/2005	Ulrich Wallner	KUCH-1	4623
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Scott R Foster Pandiscio & Pandiscio 470 Totten Pond Road Waltham, MA 02451-1914			EXAMINER EPPEL, DRYAN L	
			ART UNIT 3635	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/512,409

**Applicant(s)**

WALLNER, ULRICH

**Examiner**

BRYAN EPPES

**Art Unit**

3635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-34 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 25 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-85/86)  
Paper No(s)/Mail Date 10/25/2004  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This is a first office action on the merits for application serial number 10/512,409 filed 10/25/2004. Claims 1-34 are pending.

#### ***Drawings***

1. The drawings are objected to because:
  - a. Reference character "22" does not appear in the drawings and has been described using inconsistent terminology (e.g. "three-dimensional structure, connection unit, concerned structure). Please maintain consistent descriptive language per reference character throughout the specification.
  - b. Reference characters "44", "58", "77", "92", "97", and "98" do not appear in the drawings.
  - c. Reference characters "95" and "96" are referred to as concave brackets (Pg. 26) which is inconsistent with the prior description of a "plate" and "concave sides" respectively.
  - d. The drawings must show every feature of the invention specified in the claims. Therefore, the bar-element exhibiting different structure at both of its ends, as described in claim 12, must be shown or the feature(s) canceled from the claim(s). Also, a paneling attached at connection elements of a truss, as described in claim 21. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. The claims are objected to because of the following informalities:
  - e. Claim 1: The phrase "each of the elements" lacks proper antecedent basis. A bar-element, further bar-element, and connecting element have already been described. Appropriate correction is required.
  - f. Claim 3: The language "comprises a selected one of..." appears to be an improper Markush group (MPEP 2173.05(h)).
  - g. Claim 7: The phrases "the cut-outs" and "the ring" lack proper antecedent basis.

- h. Claim 9: The phrase "the shaft" lacks proper antecedent basis.
- i. Claim 19: The phrase "the elements" lacks proper antecedent basis.
- j. Claim 34: The phrase "the guiding drill-hole" and "the plugging cavity" lack proper antecedent basis.
- k. Please review the reference characters in the claims for consistency. It appears various separate features in the claims are directed to the same reference character. As described above, please maintain consistent descriptive language per reference character throughout.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 3. Claims 1-26 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Please review the claim language for comprehension issues that may have arisen after translation and amendment. The claims will be examined as best understood by Examiner.
  - l. Claim 1. Pg. 5 Lines 3-10 contains language unclear as to what it is purporting to describe. The limitation seems to describe a surface of a surface which is a three dimensional object.

- m. Claim 6. The claim appears to suggest that a bar-element includes a cut-out penetrating a core, which has not been previously claimed nor shown in the drawings, which is indefinite since the core is not a feature of the bar-element.
- n. Claims 11 & 12. The claim is unclear as to what it is purporting to describe. The claim will be interpreted as requiring the surface of the bar to be cylindrical. The language "to be" and "within or without" is indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.
- o. Claim 14. The language "to be" is indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.
- p. Claim 15. The language "and/or" is indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.
- q. Claim 24. The language "potentially present" is indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.
- r. Claim 29. The language "and/or" is indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. The claim also suggest "a processing-tool" is a separate component from "at least one tool" as described in claim 28, however both reference character "113." If the processing tool and at least one tool are intended to be one in the same, then the claim seemingly sets forth a tool having a clamping device with a means

at both ends of the clamping device for holding itself (the tool), which is not shown in the drawings.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 7-12, and 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Benjamin (U.S. Pat. 2,709,318).

s. Claims 1, 2, 3, 14 & 15. Benjamin discloses bar-elements L-1 & L-2 joinable to form a truss, and connecting elements 7, 9, 11 & 12 insertable between the bar-elements at junctures where bar-elements axes' are not coaxial to each other (Fig. 2), wherein the bar-elements and connection elements are constructed of wood (i.e. high-growing plant and regenerative) (Col. 3 Lines 15-18); as best understood by Examiner, the elements in combination include cylinder shapes and hollow cone shapes; the surfaces permitting assembly by plugging together and suitable for a locking connection, by way of opening 13 resisting the expanding forces created by a cut slot 21, otherwise described as a clamping force (See Fig. 2).

Regarding claim 15, the structure of the apparatus renders the claimed method steps inherent since the claimed method steps would inherently be performed when manufacturing the system as disclosed above.

t. Claim 7. Benjamin discloses the connecting elements 7, 9, 11, & 12 as exhibiting an annular shape, capable of the insertion of a screw-like spreading element. Functional language such as "for," "can be," and "adapted to" does not require a positive recitation setting forth the limitation, but only the prior art be capable of performing as such.

u. Claim 8. Benjamin discloses the connecting elements as exhibiting a discoidal shape with a circular base (See Fig. 2 & 3).

v. Claim 9. Benjamin discloses the connecting element as exhibiting at least one surfaced area including part of a hollow cylinder 13 and 15, for connecting a shaft (See Fig. 2 & 3).

w. Claim 10. Benjamin discloses at least one bar-element L-1 with a round shape at its outer surface. The term "milled" is product-by-process in nature; therefore, the claim does not depend on its method of production, but the resulting structure (See MPEP 2113).

x. Claims 11 & 12. Benjamin discloses, as best understood by Examiner, a bar-element L-1 & L-2, which include surfaces resembling cylinder rods.

y. Claim 16. Benjamin discloses wherein the bar-element is symmetrical with an in line axis (See Fig. 2).



- z. Claim 17. Benjamin discloses slots 21 on a surface of the bar-elements to facilitate a radial spring-like movement (*See Fig. 2*).
- 5. Claims 27-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Shultz et al. (U.S. Pat. 3,486,209).
  - aa. Claim 27. Shultz discloses an apparatus, described as a lathe 10, capable of machining and further, producing the claimed elements (*See Fig.*).
  - bb. Claim 28. Shultz discloses an apparatus comprising at least one tool, shown as a slide 27 comprising a clamping device, shown turret 34(*See Fig.*).
  - cc. Claim 29. Shultz discloses wherein each end of the turret is capable of holding a tool (*See Fig.*).
  - dd. Claim 30. Shultz discloses rails 17 to guide the tools in a feeding direction along a longitudinal axis of the apparatus (*See Fig.*).
  - ee. Claim 31. Shultz discloses at least one cutting tool in the shape of a milling head, shown as an endmill attached to turret 34 (*Fig.*). While an endmill is capable of machining the inner and outer surfaces of a material simultaneously, the Shultz lathe also includes a second tool 38 capable of machining in conjunction with the first tool.
  - ff. Claim 32. Shultz discloses at least one tool shown attached to turret 34, adapted to rotate around an axis, and with a cutting edge for creating a cavity (*Fig.*).

gg. Claim 33. Shultz discloses the tool has a cutting region about its peripheral boundary surrounding a central support and guiding portion, shown as a drill 36 (See Fig.), capable of drilling more than one hole in one work step.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-23, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vella (U.S. Pat. 4,505,609) in view of Der Yuen et al. (U.S. Pat. 2,703,724).

hh. Claims 1-6, 14, & 15. Vella discloses bar-elements 12 joinable to form a truss, and connecting elements 16 insertable between the bar-elements at junctures where bar-elements axes' are not coaxial to each other (See Fig. 1); as best understood by Examiner, the elements in combination include cylinder shapes and hollow cone shapes; the surfaces permitting assembly by plugging together and suitable for a locking connection, by way of the core 18 of the connecting element 16 insertable within a bar-element 12 and spreadable by a conically widening element 26 moved by a fastener shaft 30 and 32 into a centric cut-out of the core 18 thereby pressing the core 18 against an inside wall of a bar-element 12 (See Figs. 1-10).

Vella teaches all the limitations of the claim as described above, but lacks wherein the materials for the bar-elements and connecting elements are high-growing plants and regenerative respectively. Der Yuen et al. (hereinafter Der Yuen) teaches a bar and connecting element system constructed from bamboo (Der Yuen Col. 1 Line 17), interpreted as a high-growing plant, and plastic (Der Yuen Col. 4 Line 14), interpreted as regenerative in as much as it is recyclable, as known building materials exhibiting an exceedingly efficient strength-to-weight ratio (Der Yuen Col. 1 Line 18). Therefore it would have been obvious to one of ordinary skill in the art, at the time of the invention, to substitute the material of Vella with the material as taught by Der Yuen since they are known building materials exhibiting an exceedingly efficient strength-to-weight ratio.

Regarding claim 15, the structure of the apparatus renders the claimed method steps inherent since the claimed method steps would inherently be performed when manufacturing the system as disclosed above.

- ii. Claim 7. Vella discloses the connection element 16 exhibits an annular shape which is capable of a fastener inserted therein (See Fig. 6).
- jj. Claim 8. Vella discloses the connection element 16 exhibiting a discoidal shape, generally at 42, with a circular or ring-shaped base, generally at 40 (See Figs. 6-8).
- kk. Claim 9. Vella discloses the connecting element as exhibiting at least one surfaced area including part of a hollow cylinder 50, for connecting a shaft (See Figs. 6, 7, & 9).

ll. Claim 10. Vella discloses at least one bar-element 12 with a round shape at its outer surface. The term "milled" is product-by-process in nature; therefore, the claim does not depend on its method of production, but the resulting structure (See MPEP 2113).

mm. Claims 11 & 12. Vella discloses, as best understood by Examiner, a bar-element 12, which include surfaces resembling cylinder rods.

nn. Claim 13. Vella discloses wherein the bar-element 12 consists of a tube (Col. 1 Line 63).

oo. Claim 16. Vella discloses wherein the bar-element 12 is symmetrical with an in line axis (See Fig. 1).

pp. Claim 17. Vella discloses slots 34 on a surface of the connection elements 16 to facilitate a radial spring-like movement (See Fig. 8 & 9).

qq. Claim 18. Vella discloses a spreading element 26 inserted into a bore coaxial with a plug-connection to permit pressure to be exerted on the end of a bar-element (See Fig. 9).

rr. Claim 19. Vella discloses pressing, interpreted as clamping, the bar-element 12 on the core 18 by way of diametric expansion which would necessarily occur after plugging the elements together (See Figs. 1-10).

Therefore, the structure of the apparatus renders the claimed method steps inherent since the claimed method steps would inherently be performed when manufacturing the system as disclosed above.

ss. Claim 20. Vella discloses the connecting elements are used as end pieces along a truss edge (See Fig. 1), which is capable of being connected to a foundation, ceiling, and roof.

tt. Claim 21. Vella discloses the invention as described above, but lacks wherein a panel is attached at the connection elements. However, Vella teaches securing a paneling, described as a sheeting or canvas, to the frame elements in any manner desired; therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to attach paneling at the connection elements since the location of the attachment would perform substantially the same function in substantially the same way as in another location without any new or unexpected results.

uu. Claims 22 & 23. The Vella/ Der Yuen combination teaches using bamboo as bar-elements which would necessarily require the ends be processed, specifically cut, before any use as claimed. Furthermore, the wall thickness is equal to or less than a predetermined wall-thickness.

vv. Claim 25. The Vella/ Der Yuen combination teaches a hole 50, in as much as the hole may be considered more than one hole that is axially aligned and joined within a connection element 16, which leads into the modified bamboo bar-element to obtain a link between bamboo-culms (Figs. 6-9).

ww. Claim 26. The Vella/ Der Yuen combination teaches a hole 50 which is capable of being a tool guide. The language "used as a tool guide" without

additional structure is an intended use which requires the prior art only be capable of performing as such.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vella (U.S. Pat. 4,505,609) in view of Der Yuen et al. (U.S. Pat. 2,703,724) as applied to claims 23,22, and 14 above, and further in view of Casler (U.S. Pat. 1,799,501).

xx. Claim 24. The Vella/ Der Yuen combination teaches all the limitations of the claim as described above, but lacks wherein the bamboo nodes are pierced or otherwise made passable. Casler teaches drilling holes in the nodes of bamboo to equalize pressure in individual chambers and provide a means for waterproofing. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the Vella/ Der Yuen combination with the step of piercing or otherwise making passable the nodes of bamboo as taught by Casler to equalize pressure in individual chambers and provide a means for waterproofing.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN EPPES whose telephone number is (571)270-3109. The examiner can normally be reached on M-F; alt. Fri. off (7:30am-5pm EST.).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on (571) 272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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